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ABSTRACT  
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(54) Carpet joining tape  
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(57) Claim

1. An improved carpet joining tape including an electrical conducting foil extending along said tape and adapted, in use, to be heated by an electric current to melt adhesive on said tape, said foil comprising two or more electrically separated strips extending along said tape, whereby, in use, said strips may be connected in series by bridging members between said strips, thus substantially reducing the amount of electrical current necessary to obtain the desired heating effect.

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In order that the invention may be more readily understood a particular embodiment thereof will now be described with reference to the accompanying drawings wherein:

5 Fig. 1 is a sectional end view of a carpet joining tape according to the invention,

Fig. 2 is a plan view of a length of tape according to Fig. 1 and

10 Fig. 3 is a circuit diagram of a current supply apparatus suitable for supplying current to the foil according to Figs. 1 and 2.

15 Referring now to Fig. 1 there is shown a carpet joining tape comprising a backing member 10 formed from paper or like material and forming a carrier for supporting the other components of the tape. An electrical conducting foil 11 is arranged on the backing member 10 and comprises two parallel strips separated by a gap 12 and extending lengthwise along the tape. The conducting foil 11 may be held on to the backing member 10 in one  
20 of two ways and according to the present embodiment is held thereto by an adhesive coating 13 which is applied over the foil 11 with a thread arrangement 14 being arranged therebetween.

25 The thread arrangement 14 comprises a weft of Rayon (Registered Trade Mark) or like thread which provides transverse strength to the tape to assist in joining two

It should be evident from the description herein that the present invention provides considerable advantages in carpet joining tape. Clearly the invention is not limited to the particular embodiment described herein. For example, the tape according to the invention could readily comprise more than two separate conductive foils extending along the tape and adapted to be joined together.

compromises of the charitable note specification mentioned herein

the capacitor  $C_1$ ,  $C_2$  and  $C_3$  and associated circuitry which causes firing of the triacs  $TC_1$  -  $TC_2$  and  $TC_3$ . Firing of the triacs energizes  $T_1$  which causes an output current to the tape. The output current is measured by the secondary current of transformer  $T_2$  energizing control meter  $M$ . The components of the circuit are shown in Fig. 2.

shown in the fig: and provide a 230A 6 amp supply to the apparatus. Thermal protection is provided for the transmitter by a circuit breaker CB1 which provides an open circuit in the case of a continuous current of 10 amps for a duration of about 10 minutes. The circuitry is arranged so as to prevent an output current from the transmitter.

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output therefore. The primary current is controlled using a phase shift principle involving capacitors C1, C2 and C3 as well as triacs TCI and TCS. In use the active and neutral of a domestic mains supply are connected to the respective active and neutral terminals shown in the figure 3.22a.

Fig. 3 shows a circuit diagram for current supply apparatus to supply heat during current to the tape shown in Figs. 1 and 2. The circuit diagram is shown in Fig. 11 not be explained in detail as it should be self-explanatory to persons skilled in the art. Briefly, the current supply apparatus comprises a transformer having a controllable primary in order to provide a variable current supply at the

To the embodiment is about  $1/8$ th of an inch.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. An improved carpet joining tape including an electrical conducting foil extending along said tape and adapted, in use, to be heated by an electric current to melt adhesive on said tape, said foil comprising two or more electrically separated strips extending along said tape, whereby, in use, said strips may be connected in series by bridging members between said strips, thus substantially reducing the amount of electrical current necessary to obtain the desired heating effect.
2. A tape according to claim 1 wherein there is an even number of said strips so that both sides of an electrical current supply may be connected to the tape at the same end with appropriate bridging at one or both ends to provide said series connection.
3. A tape as defined in claim 2 wherein there are two said strips, whereby the electrical current supply is adapted to be connected between the respective strips at one end of said tape and a said bridging member is adapted to be connected between said strips at the other end of said tape, thus avoiding the need for lengthy heavy current leads.
4. A tape as defined in claim 1, 2 or 3 said tape includes a paper type backing member onto which said foil is sewn, a weft of thread to provide transverse strength, and said adhesive which is arranged in longitudinally extending ribs on said foil.
5. An improved carpet joining tape substantially as hereinbefore described with reference to Figs. 1 and 2 of the accompanying drawings.

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